

FUNCTIONAL ANALYSIS AND TREATMENT OF
INAPPROPRIATE VERBAL BEHAVIOR

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The present study examined the possible function of inappropriate verbal behavior of an adult man who had been diagnosed with both mental retardation and psychosis. Results of a functional analysis indicated that inappropriate verbal utterances were maintained by attention. An intervention consisting of the differential reinforcement of appropriate verbal behavior effectively reduced the inappropriate behavior.

DESCRIPTORS: developmental disabilities, dual diagnosis, functional analysis, mental illness, verbal behavior

Functional analysis methods have greatly enhanced our ability to treat problem behaviors based on the functions they serve. Maintaining reinforcers have been identified for various behavior disorders (e.g., aggression, self-injury) exhibited by individuals with developmental disabilities (e.g., Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994). More recently, functional analysis has been extended to more complex responses, such as the content of vocal speech.

Among individuals with developmental disabilities, the content of verbal utterances may be inappropriate or under inappropriate stimulus control. Such bizarre speech is sometimes considered to be symptomatic of an underlying mental illness, such as schizophrenia. Results of several studies indicate that inappropriate verbal behavior may be sensitive to social consequences (e.g., Durand & Crimmins, 1987; Mace, Webb, Sharkey, Mattson, & Rosen, 1988).

Previous research on the function of inappropriate speech was replicated and ex-

tended in this study by conducting a functional analysis of the inappropriate verbal utterances exhibited by a man who had been diagnosed with both mental retardation and mental illness. These findings were used to develop a functionally based treatment.

METHOD

Participant, Setting, and Response Measurement

Fernando, a 25-year-old man who had been diagnosed with moderate mental retardation and a psychotic disorder not otherwise specified, exhibited inappropriate vocalizations that included comments of a sexual nature and illogical or irrational statements. Fernando reported that he experienced auditory hallucinations, and his inappropriate verbal behavior was considered to be symptomatic of an underlying psychotic disorder. He attended a large community-based day treatment program. He took 750 mg of divalproex sodium, 4 mg of resperidone, and 100 mg of thioridazine daily throughout the study. All sessions were conducted in a room (3 m by 3 m) at the

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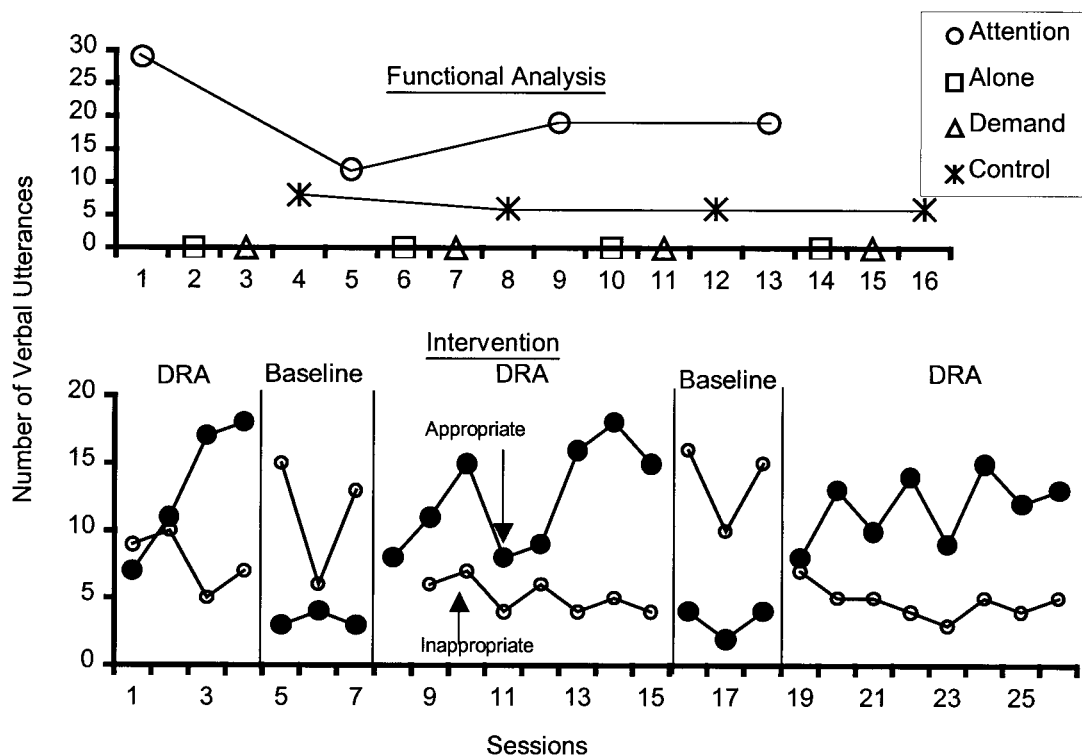


Figure 1. The number of inappropriate verbal utterances during the functional analysis condition (top panel), and the number of appropriate and inappropriate utterances during DRA and baseline conditions (bottom panel).

participant's day treatment facility. The room was equipped with a table, chair, and a one-way observation mirror.

Inappropriate verbal behavior was defined as vocal utterances that were not relevant to the context, sexually inappropriate remarks, illogical placement of words within a sentence, or "psychotic" statements (e.g., "There is a purple moose on my head named Chuckles"). Appropriate verbal behavior was defined as vocal utterances not specified by the above characteristics. Counts of appropriate and inappropriate verbal behavior were collected during 10-min sessions. A new utterance was scored when at least 10 s elapsed from the end of one statement to the beginning of another statement. Interobserver agreement was collected during 75% of all sessions. Interobserver agreement was calculated by dividing

the smaller number of utterances by the larger number of utterances and multiplying this ratio by 100%. Mean agreement was 100% for both inappropriate and appropriate responses.

Procedure

Functional analysis. Four conditions (attention, demand, alone, and control) were alternated in a multielement design. During the attention condition, the experimenter responded to Fernando's inappropriate verbal utterances with 10 s of attention in the form of comments (e.g., "You know you should not say things like that"). During the demand condition, the experimenter presented Fernando with basic academic tasks. Each occurrence of inappropriate verbal behavior produced 10 s of escape from the tasks. During the alone condition, Fernando was in the

room alone and was observed via a one-way mirror. During the control condition, Fernando had access to his favorite activities (puzzles, markers, and craft supplies). The experimenter delivered noncontingent attention every 30 s and provided no consequences for inappropriate behavior.

Intervention. The intervention consisted of differential reinforcement of alternative behavior (DRA). Each appropriate verbal utterance was followed by 10-s statements that were appropriate to Fernando's statements or questions. For example, if Fernando made a comment about an activity that he liked, the experimenter told him that it was interesting and hoped he could do it again soon. No attention was provided to Fernando following the emission of an inappropriate verbal statement. The intervention was alternated with a baseline condition in a reversal design using the same experimenter from the functional analysis. During baseline, inappropriate behavior produced attention and appropriate verbal behavior was ignored.

RESULTS AND DISCUSSION

Results of the functional analysis (top panel of Figure 1) suggested that inappropriate verbal behavior was maintained by attention from others. The DRA intervention (bottom panel) was associated with a decrease in the number of inappropriate utterances and a corresponding increase in appropriate utterances. These results were replicated across several contingency reversals, indicating that the treatment was effective in

controlling the content of Fernando's verbal behavior. These findings replicate those of Mace et al. (1988) and Durand and Crimmins (1987) and extend the functional analysis methodology to a person with dual diagnosis. Future research on the function of "psychotic" verbal behavior should include a larger number of participants to determine the prevalence of social functions for this type of behavior and the efficacy of treatment with differential reinforcement.

In summary, we have added to the growing literature on the functional analysis approach described by Iwata et al. (1982/1994) for the assessment and treatment of inappropriate verbal behavior. The use of such technologies may assist service providers in the treatment of problem behavior that is initially considered to be symptomatic of an underlying psychiatric illness but is under environmental control.

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